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ABSTRACT

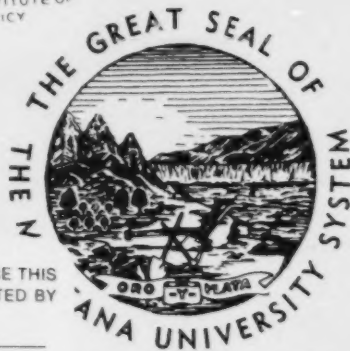
The role and scope of the Montana University and postsecondary education system are described. It is explained that the primary goal of the Montana University System is to use as effectively as possible the resources available to it in providing high quality educational opportunities and service to the people of the state, encompassing the three traditional functions of a university--instruction, research, and public service. The missions of each of the six individual campuses are explored. The nature of the degree programs in the liberal arts (both the thematic programs and the interdisciplinary programs) and the non-degree area studies programs are discussed. The college(s) responsible for each of the areas of study and the degree(s) offered are identified for each of the following study areas: humanities, fine arts, social sciences, biological sciences, physical sciences, teacher education, business and management, engineering, technology, industrial arts, home economics, allied health, human services, and unique professional programs (e.g., law, agriculture, physical therapy). Procedures for review of academic programs are listed. (PHR)

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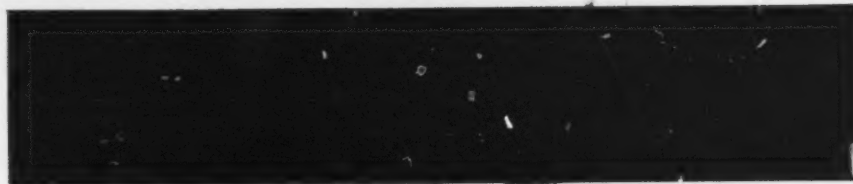
MONTANA UNIVERSITY SYSTEM

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Helena, Montana

Units of the Montana University System

University of Montana, Missoula	Northern Montana College, Havre
Montana State University, Bozeman	Western Montana College, Dillon
Eastern Montana College, Billings	Mont. College of Mineral Science & Technology, Butte

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ROLE AND SCOPE
of the
MONTANA UNIVERSITY SYSTEM

Adopted June 25, 1979
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Board of Regents
Montana University System

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Introduction

This role and scope statement is designed as an academic master plan for the future. It cannot correct totally what many believe to be mistakes of the past, but it can ensure that such mistakes are not repeated.

There are those who believe that six campuses are too many for Montana to support. If we were starting over we probably would not establish six campuses. But one has to hope that neither would we add to six colleges and three state supported community colleges a group of five more state supported postsecondary institutions for vocational-technical training. There are 14 state-supported postsecondary institutions in Montana, not six.

There are compelling reasons for not closing any of the campuses of the Montana University System, and there is little concrete evidence, after all the factors are considered, that a closure would result in any fiscal or educational benefit to the state. Accordingly, both the Legislature and the Regents have decided that we should continue higher education activity at all of the present six locations.

That decision creates an administrative responsibility and challenge to use our resources in a cost-effective manner without sacrificing educational opportunity or quality. It means continual integration and unification of the system under central authority, with the campuses engaging increasingly in collaborative efforts, and sharing rather than duplicating resources. It means, in short, fulfilling the mandate of Montana's new Constitution and continuing the progress toward integration

made since 1973 by the new Board of Regents and the first Commissioner of Higher Education.

For a good many years program duplication has been a bugaboo in discussions of Montana higher education. Montana followed the national pattern during the growth era of the 1960's and saw a seemingly unchecked proliferation and duplication of programs. It is easy for us, in retrospect, to identify many instances where campuses were allowed to develop strength (and hence expectations) in fields from which they should have been restricted. For the most part during that period the campuses did not object to each other's development of duplicating programs. It looked then as though there would always be sufficient enrollments to sustain all programs.

Now we are faced with the prospect of declining full-time enrollments after 1982, and with acute competition among campuses for students. Where "duplication" was once the buzz word of critics external to the system, it is now seen (in retrospect) by many within as the necessary and sufficient cause for enrollment declines on some campuses, and its eradication is seen as the salvation of some declining programs.

It goes without saying that some duplication at the undergraduate level (e.g. English, mathematics) is essential. But there has been unnecessary, and potentially harmful, duplication allowed in the past. We must concern ourselves with 1) the extent to which it is fair, feasible and helpful to eliminate each of those duplicating programs, and 2) how we avoid unnecessary and harmful duplication in the future.

The new Board of Regents since 1973 has reversed the trend toward duplication. We have eliminated several duplicating degree programs and have not allowed others to occur. We have established rigorous criteria and procedures for the approval of new programs. We have established a process for review of all academic programs on all campuses. In a sense, we have been working at "role and scope" in an evolutionary fashion during the past 5-1/2 years. This statement is the capstone of that effort. We deal with duplication, but at the same time, and in a more positive vein, we hope to deal adequately also with the aspirations of each campus and the system as a whole.

This Role and Scope document should be viewed as a guide. It is both limiting to the institutions and at the same time encourages initiative and imaginative program development and expansion. It clearly indicates appropriate directions in which the units should develop. It is an evolving document, to be carefully and deliberately modified as needed. It shall be reviewed every two years so that it will continue to be relevant as needs and circumstances change.

Part I

Role and Scope of the Montana University System

In this report we do not, as some have urged, ignore 85 years of history and speculate on how one would redraw the higher education map of Montana if we were free to start anew. The histories of our campuses are closely intertwined with the histories of communities, regions and the state, and with the lives of generations of students and those who serve them. We have discovered that we can no more abandon this history than we could abandon the accidents of state boundaries. We must be concerned with how we can most creatively and efficiently use the higher education resources which we now have in order to serve Montana and the nation. As set forth in our state constitution, all Montana's citizens should have ready access to higher education of good quality and of relevance to their purposes, interests and abilities.

General Purpose

The primary goal of the Montana University System is to use as effectively as possible the resources available to it in providing high quality and diverse educational opportunities and service to the people of Montana. The University System encompasses the three traditional functions of a university--instruction, research and public service--and strives for excellence in all three areas.

The Board of Regents recognizes that these goals can be met most effectively through the maintenance of a coherent, integrated University System in which the various campuses complement one another and are fully responsive to the central authority of the Board of Regents and Commissioner of Higher Education, through the Presidents of the six units.

Under the Constitution of the State of Montana, the governance and control of the Montana University System are vested exclusively in the Board of Regents of Higher Education which has full power, responsibility, and authority to supervise, coordinate, manage and control the Montana University System. The Board of Regents appoints a Commissioner of Higher Education as the chief administrative officer of the Montana University System.

The management of each unit in the University System is vested in the established governance structure, comprised of the president as the chief administrator, and various boards, committees, councils and other constituencies.

To the maximum extent feasible, the campuses will coordinate activities, share resources and enter into collaborative programs toward the ends of improving quality, extending opportunity, avoiding unnecessary duplication and preventing non-essential escalation of costs. The Board of Regents assumes continuing responsibility to review existing programs, explore new program needs and, where appropriate, establish new programs, relocate programs, and terminate programs. The Commissioner and his staff, under delegation of broad administrative authority from the Regents, will work with the campuses to promote the development of relationships between and among them which will provide better educational opportunities for the citizens of the state and nation and ensure the most effective and responsible use of resources.

The primary mission of all campuses, taken together, is to provide high quality educational programs. The goal of these programs is to

develop the abilities of students and to provide a base for continued growth after formal education has ended. The Montana University System emphasizes that in the course of this development, each student should discover and then realize his or her full potentialities. Educational programs should stimulate critical analysis, clear and effective communication, and the creative process. In addition to vocational, professional and pre-professional education, students should also broaden their cultural horizons by contact with the creative arts, sciences and humanities, and achieve an understanding of the political, social, economic and ethical problems of the contemporary world and the relation of their studies to these problems.

Each campus should hold to the principle that a community of scholars and teachers can achieve its goals only if it maintains an atmosphere conducive to free inquiry, unfettered exploration of the unknown, and honest examination and evaluation of hypotheses and accepted bodies of knowledge.

A special mission of the two universities is to provide state, regional, and in some cases national leadership in the exploration and discovery of new knowledge; to impart such knowledge to students; and where appropriate to apply research findings to the solution of the state's problems. Faculty at the four colleges should also be encouraged to engage in creative and scholarly activity, and should be rewarded for professional achievements beyond classroom teaching.

Missions of the Individual Campuses

The Montana University System comprises six units, each with a distinctive role and character, and each with a responsibility for providing excellence in its service to the citizens of Montana. The primary responsibility of all six units is to provide quality undergraduate education. Considerable differentiation will remain among them respecting graduate education, research and public service.

The scope of the programs offered is broadest at the undergraduate level and more restricted at the graduate and professional levels. The two universities share authority to award the doctorate, and the four colleges may participate in collaborative doctoral programs with either the University of Montana or Montana State University.

The System cannot be all things to all people and will not attempt to offer all possible programs. Student access to some specialized, graduate and professional programs will be offered through cooperative arrangements between and among units within the System, as well as through cooperative interstate agreements. From this it follows that no single unit of the System will offer a full complement of programs and that, at the present level of educational technology in Montana, no location in the state can expect to be serviced with all available programs. The transfer of undergraduate credits, therefore, should be accepted between all units within the University System.

Research on each campus supports both the instructional programs and public service activities, with a particularly strong interaction

between graduate instruction and research. Areas chosen for special research emphasis are identified on the basis of the historical mission of the institution, the needs of the state and region, and unique facilities or opportunities that are available. Every faculty member is expected to show evidence of creative activity appropriate to his professional field and assignment.

The extension, continuing education and public service activities of the University System provide educational activities and service to the people of the state. Each unit offers continuing education courses and services activities only in fields that are within the defined role and scope of the institution and in which adequate expertise is available to assure the quality of the program. The units of the Montana University System shall maintain their present continuing education activities and strengthen cooperative efforts among the six campuses and the community colleges and private colleges. These activities are coordinated through the Commissioner's Office so that the total needs of the state can best be met at a minimum cost.

The Board of Regents also recognizes the contribution that the private colleges and the community colleges make in providing quality and diverse educational opportunity and service to the people of Montana. Although neither is considered part of the University System, the Board is cognizant of their programs which complement and enrich higher education in the state.

University of Montana

The University of Montana was chartered by the Montana Legislature on February 17, 1893, and opened officially on September 11, 1895, with five faculty members and 50 students. Today it is a comprehensive, multi-purpose university with about 8,500 students and 400 faculty members. It offers more than 40 major programs of study and about 15 interdisciplinary programs at the undergraduate level, master's degree programs in more than 40 fields, and the Ph.D. degree in ten: botany, chemistry (including biochemistry), forestry, geology, history, mathematics, microbiology, psychology, sociology and zoology. It also offers the Doctor of Education degree and a graduate professional degree (Juris Doctor) in law.

The academic core of the University is its College of Arts and Sciences, in which about two-thirds of the undergraduate students are enrolled. Complementing the college's programs, and dependent upon the college for the broad educational base on which specialized studies are founded, are the Graduate School and seven professional schools: Business Administration, Education, Fine Arts, Forestry, Journalism, Pharmacy and Allied Health Sciences, and Law.

The University should extend its schedule of course offerings on campus to provide an opportunity for non-traditional students in Missoula to gain access to its programs. The University of Montana should continue to offer continuing professional education (CPE) in business, clinical psychology, communication sciences and disorders, forestry and wildlife management, law, pharmacy, physical therapy and social work throughout

the state. In education, gerontology, the humanities, and journalism, the University should maintain and expand its service, primarily in the western region. In cooperation with Montana State University, the University should maintain its extensive CPE Program for allied health personnel and physicians in western Montana. The University also offers a summer program to provide opportunities for enrichment, acceleration, and remediation for traditional students, and to serve other students who cannot attend during the fall, winter, or spring.

The University of Montana has a strong mandate to maintain active research programs, and all faculty members are expected to engage in research or creative activity. Research activity is particularly strong in the humanities, social and behavioral sciences, physical, biological and biomedical sciences, and forestry. In addition to research facilities within schools and departments, the University maintains a number of specialized laboratories, institutes and research facilities. Among these are the Yellow Bay Biological Station, Montana Forest and Conservation Experiment Station, Animal Behavior Laboratory, Institute for Social Research, Lubrecht Forest facilities for research and teaching, Wood Chemistry Laboratory, Bureau of Government Research, Bureau of Business and Economic Research, Bureau of Educational Research and Services, Stella Duncan Memorial Institute for Biomedical Research, Water Resources Research Program, Geology Field and Research Station at Dillon, the Speech, Hearing and Language Clinic, Montana Criminal Law Information Research Center and Montana Defender Project, Earthquake Laboratory, the Computer Center, the Environmental Studies Laboratory of the Botany Department, and the Wilderness Institute.

The University of Montana has primary responsibility for graduate instruction in business, the arts, humanities, social science and behavioral science, and shares this responsibility in the physical and biological sciences and the allied health professions. The programs in law, forestry, pharmacy, journalism, physical therapy and communication sciences and disorders are unique in the University System.

The University of Montana generates and imparts knowledge, cultivates the desire for rational inquiry, and encourages intellectual discipline and individual diversity that fosters dialogue between professional schools and academic disciplines, sciences and humanities, theorists and practitioners. The University historically has been the center of liberal education in Montana and should be supported in its efforts to perpetuate a rich academic tradition which for decades has constituted a special and unusual asset to Montana and the Rocky Mountain West, and has given the University its special character within the Montana University System.

Montana State University

Montana State University is a comprehensive, multi-purpose institution maintaining, in the land-grant tradition, programs of instruction, research and public service. The University was founded on February 16, 1893, as the Agricultural College of the State of Montana and instruction started on April 17 of that year. Today the University has nearly 10,000 students with an academic faculty of over 500 and another 200 professionals engaged in research and extension activities.

Instruction is offered through the colleges of agriculture, arts and architecture, education, engineering, and letters and science, and the schools of business and nursing. Instruction leading to the bachelor's degree is offered in 45 fields, with graduate instruction in 34 fields at the master's level and in 19 fields at the doctoral level. The academic program emphasizes the professions of agriculture, architecture, business, engineering, education and nursing, along with strong support from the arts, humanities, biological, physical and social sciences. The biological, physical and social sciences offer degree programs in their own right and in addition contribute significantly to the professional curricula. The University has a major role in the integration and development of health professional education and research. The professional programs in agriculture, nursing, architecture and medicine are unique in the University System.

The research programs of the University serve the dual functions of supporting the instructional program and also of contributing to the

solution of important problems of the state and nation. The Agricultural Experiment Station has eight locations in the state, including the Bozeman campus. The station components are devoted to solving present and future agricultural and home economics problems of local, regional and national concern. The distribution of research centers is such that the peculiarities of local or area soil, water and climate can be considered. Other specialized facilities include the Engineering Experiment Station, Computing Center, Museum of the Rockies, Institute of Applied Research, Foothills Nature Area, Statistical Center, Montana University Joint Water Resources Research Center, and the Bureau of Educational Research and Field Services. Major research areas include agriculture, engineering, and the biomedical and physical sciences with large programs in land reclamation and magnetohydrodynamics.

The public service function of the University had its origin in the establishment of the Cooperative Extension Service in 1914. Financial support for its operation comes from county, state and federal governments. County agents and specialists are an integral part of the University and channel information to all Montanans to aid in solving home, farm and community problems. The Continuing Education Program extends the educational facilities of the University to the citizens of the state by providing off-campus instruction in the form of courses, institutes and conferences for individuals not regularly enrolled at Montana State University. In addition, an annual summer session and certain specialty oriented, non-credit offerings are also a part of the campus program.

Montana State University has evolved during the last two decades into a comprehensive, multi-purpose university. It has drawn its strength from the land-grant tradition, and historically its special character within the Montana University System springs from an emphasis on practical professional programs and applied research. Its roles in basic research and liberal education at the undergraduate level are important and should continue. Yet, rather than being the mainspring as it is at the University of Montana, the college of letters and science at Montana State University has grown and taken shape primarily in service to a group of professional programs which are vital to the welfare of the state.

Eastern Montana College

Eastern Montana College was established on March 12, 1927, with an initial authorization to prepare teachers for the elementary schools. The establishment of the college was in response to needs expressed by the eastern part of the state, since all the existing institutions of higher education were in the western half. Eastern has grown with the city of Billings into the major educational center in eastern Montana.

Eastern Montana College is now a comprehensive state college with programs in the liberal arts, teacher training, business and human services. Graduate programs through the master's level are offered in teacher training, special education and related areas. The programs in special education and rehabilitation are unique in the University System. Carefully selected liberal arts majors may be added to complete the process started in 1966, and additional programs will be developed in human services with particular attention to serving the needs of the dispersed population of eastern Montana.

Eastern is also encouraged to develop a few new programs to meet the needs of metropolitan Billings, including expanded programming for part-time students. Eastern should maintain appropriate interinstitutional relationships with the University of Montana and Montana State University to promote public service efforts to help meet societal, governmental, industrial and continuing education needs of its urban area.

Quality instruction of students as well as promotion of scholarly interests of both students and faculty are primary purposes of Eastern

Montana College. The underlying principle of the institution is a commitment to the value of lifelong learning. The continuing education program gives the student an opportunity to learn the newest developments in his field of study and to explore newly emerging areas of interest and concern.

Eastern's special character as a comprehensive state college needs to be carefully defined. It sits at once in the state's most populous and rapidly developing urban center and on the edge of the vast, thinly settled eastern one-half of Montana which has not been served adequately by the University System. New programs addressed to these special clienteles must be regarded as inevitable. But Eastern should not be encouraged to duplicate the core arts and sciences degree programs of the universities. There is an opportunity at Eastern for innovation in the development of new pre-professional and professional programs addressed to the needs of its two-faceted geographic service area.

Northern Montana College

Northern Montana College was authorized by the Legislature on March 8, 1913, but did not open for instruction until September 24, 1929. Northern has been a regional, multi-purpose institution from its inception, offering pre-professional and professional courses of study in the liberal arts and sciences, teacher education, and vocational-technical studies. Originating as a two-year pre-professional institution, Northern has maintained this three-pronged mission throughout most of its 50-year history. Northern seeks to be a quality undergraduate institution where good teaching has top priority, and where scholarly research is oriented toward the mission of the College.

Northern has sole responsibility in the Montana University System for vocational-technical education, primary responsibility for vocational teacher training, and offers the Bachelor of Technology degree for students who wish to combine a liberal arts background with vocational training. Further, Northern has the sole responsibility for meeting the certification needs of the state through an itinerant vocational teacher education program. Northern offers master's degrees in elementary education, vocational-technical education, and industrial arts as well as bachelor's degrees in elementary, secondary and vocational-technical education.

Because of its location, Northern is uniquely situated to provide the educational, cultural and public service leadership needed for the vast area which it serves. In addition to the regular degree offerings carried through the continuing education program, the College seeks to

offer special enrichment programs, seminars, institutes, workshops, credit and non-credit courses to meet the growing demand for non-traditional educational opportunities.

Northern should develop appropriate interinstitutional relationships within the state in order to participate in expanded programs in technology, and in meeting the manpower needs of industrial society. Northern should also maintain continuing liaison and explore cooperative ventures with the state's community colleges and postsecondary vocational-technical centers. Northern draws its special identity within the Montana University System from its near-monopoly in vocational training and vocational teacher education. The college should assume a leadership role in postsecondary vocational education in Montana.

Western Montana College

Western Montana College was established on February 17, 1893, as the State Normal School. The first session of school opened on September 7, 1897. Throughout its history Western Montana College has been a teacher training institution and it will continue this emphasis while broadening its curricular base. While striving to maintain quality faculty and to strengthen academic standards, the primary concern of the college will be instruction and not research. Expansion of the curricular base will be partially achieved by continuing and, when appropriate, expanding the cooperative program with the University of Montana and also with other units of the Montana University System. Western Montana College will expand its service functions, summer session and program of continuing education to meet the changing and increasing needs of the citizens of the State of Montana.

Western should capitalize on the positive aspects of its non-urban location in a setting of great natural beauty and recreational opportunities. Academic programs can and should be developed which exploit these assets and which make the most of the close personal interaction of students, faculty and administration so uniquely advantageous to the small college.

Western offers graduate work leading to the master's degree and fifth-year professional certificate in education. Bachelor's degrees are offered in elementary education, secondary education, and natural heritage. Associate degree and transfer programs are offered in several areas, and additional non-degree programs will be developed to improve

the articulation with the University of Montana and other units of the Montana University System.

Montana College of Mineral Science and Technology

Montana College of Mineral Science and Technology was established on February 17, 1893, as the Montana School of Mines. The first students were enrolled on September 11, 1900. The city of Butte was a wise and logical selection for the location of the college for it is a focal point of extensive mineral operations. Today the college has over 1,300 students.

From the beginning special emphasis was laid upon the four main branches of mineral technology--exploration, production, processing and refining. The faculty of the college and the Montana Bureau of Mines and Geology also contribute much to basic research and innovative approaches to problem solving in the very important and basic mineral industry.

In keeping with subsequent developments and the increasing sophistication of the mineral and raw materials industries, the original curriculum in mining engineering has evolved into separate, specialized curricula designed to prepare students for professional service in the complex yet specialized principal categories of raw material production. This process has resulted in present bachelor's and master's programs in engineering science and geological, geophysical, metallurgical, mineral processing, mining and petroleum engineering. A bachelor's program is offered in environmental engineering, and a master's degree is offered in geochemistry (in collaboration with the universities), geology, metallurgy and mineral processing.

To support the engineering curricula, and to meet the growing

demands for higher education opportunities, the college has developed additional educational strengths. Bachelor's degree programs are now offered in chemistry, mathematics, occupational safety and health, and society and technology.

The college provides service to state government and the citizens of the state by developing, gathering, analyzing, cataloging and disseminating information concerning the location and development of the mineral and energy resources and related resources of the state. This mission is the major responsibility of the Montana Bureau of Mines and Geology, a department of the college. In addition to research activities of individual faculty members, the college is a major participant in the state's magnetohydrodynamics research, and has been designated one of 20 national Mining and Mineral Resources Research Institutes.

Montana College of Mineral Science and Technology has four primary aims: to provide education of the highest possible quality, to prepare its students for outstanding professional attainment, to conduct needed and basic research in the mineral field and to serve the Butte/Silver Bow community through continuing education and transfer programs. Study courses, work experience and extracurricular activities blend to provide broad and thorough training for enlightened citizenship and professional excellence.

Part II

Review of Individual Disciplines and Programs

The Liberal Arts: Interdisciplinary and Thematic Programs and

Area Studies

The University of Montana, Montana State University and Eastern Montana College will all offer a reasonably full complement of degree programs in the liberal arts at the undergraduate level, although Eastern Montana College will not offer as many areas as the two universities. The graduate profile will show the University of Montana stronger in the arts, humanities and social sciences with relatively less graduate work at Montana State University. In the physical and biological sciences both universities will have strong graduate programs with appreciable work at the doctoral level. Eastern Montana College will not offer graduate work in the liberal arts, unless in collaboration with the universities.

The liberal arts are obviously essential to the general education of students at Montana Tech, Northern Montana College and Western Montana College, also, and to the teacher education programs at Northern and Western. A decade ago the unspoken assumption was that these three institutions would grow and evolve along the same general path as the two universities and in time would offer at least a modest complement of programs in the liberal arts. State finances and demographic projections now make this assumption untenable and the three institutions should restrict themselves to liberal arts offerings that: (1) help to serve the general educational needs of students and the local adult population;

(2) provide transfer programs; and (3) create unique thematic programs. Good examples of the latter are the Society and Technology degrees at Montana Tech and the Natural Heritage degree at Western Montana College. The latter program promises to give a focus and uniqueness to Western Montana College which will be essential if it is going to remain viable in the face of declining interest in teacher education. The program in society and technology offers the same potential at Montana Tech. At Northern Montana College a thematic degree should be developed which will relate the liberal arts to the unique character of that institution.

Interdisciplinary Programs

The bachelor's degree in liberal arts at the University of Montana should continue so long as it retains its integrity as a structured, focused program. The University of Montana has also successfully operated a focused interdisciplinary graduate program in environmental studies, and should continue to do so. In the absence of a thematic focus and a well-structured curriculum, interdisciplinary degree programs are discouraged.

Non-degree Area Studies Programs

This subject has received little attention from the Board of Regents, but the institutional catalogs indicate enough activity that some planning should be done so that duplicating and competing programs do not develop. Eastern Montana College is specifically authorized to offer a minor in Scandinavian studies, and Northern Montana College is authorized to offer a minor in Canadian studies. The University of Montana, under its liberal arts degree programs, offers area studies options in Latin

American studies, Asian studies and Soviet studies, and in addition maintains an interdisciplinary area studies emphasis on Western studies. Such programs should be restricted to the University of Montana and not duplicated elsewhere in the System.

The University of Montana, Montana State University, Northern, Eastern and Western are all required to offer courses in native American studies. Certainly not all of these should grow into comprehensive programs. Any expansion and development of native American studies as a discipline, perhaps even to degree status, will occur through the regular processes of program review and approval.

Humanities

The humanities have intrinsic worth as an integral part of higher education, and should be maintained on any college or university campus. While humanities instruction must take place on all campuses, further duplication of degree programs should be discouraged, and with the exception of the present master's program in history at Montana State University graduate programs in the humanities should be restricted to the University of Montana. The University of Montana shall have special responsibility for humanities program development.

Foreign Languages

The study of foreign languages has been traditionally, and continues to be an essential component of a liberal education. Foreign language is a field of study which is valuable itself, and as a complement to numerous other courses of study. Americans are traveling abroad in great numbers, foreign tourists are now coming here, and this country

has business and diplomatic dealings with every corner of the globe. Consequently, one can assume that the study of foreign languages and cultures will increase accordingly. The University of Montana will remain the most important center of foreign language study in the state. No doctorates will be offered in foreign languages. The University of Montana will continue to offer the only master's degree program (in French, German and Spanish) in the state. The University of Montana will continue to offer the BA degree in French, German, Latin, Russian and Spanish, and will offer the only program in classics (Greek and Latin). Montana State University and Eastern Montana College will offer the bachelor's degree in French, German and Spanish, and Eastern Montana College will continue its unique minor in Scandinavian studies. Northern, Western and Montana Tech will offer only non-degree instruction in languages where there is enough student interest to maintain reasonable class enrollments.

Philosophy

Student interest in philosophy should be judged by class enrollments, not by the number of degrees granted. Many students take philosophy courses as electives, but relatively few decide to major in the subject.

No doctorate will be offered in philosophy and the University of Montana will offer the only master's program. Montana State University will continue to offer the bachelor's degree. Eastern, Northern, Western and Montana Tech will offer service courses only.

Religious Studies

The University of Montana will offer the only bachelor's degree

program and may work toward developing a master's program as resources permit. The other units will offer service courses only.

English

No doctorate will be offered in English. The University of Montana will offer the only MFA in creative writing and the only MA in literature. The University of Montana will continue its master's program aimed at teachers of English. Montana State University will explore with the University of Montana cooperative arrangements to involve Montana State University faculty in graduate education for teachers of English.

Bachelor's degrees in English will be offered by the University of Montana, Montana State University and Eastern Montana College.

History

Some knowledge of history is central to any college education and all campuses should offer courses in this field. Only the University of Montana, Montana State University and Eastern Montana College will offer bachelor's degrees in history, however. The University of Montana and Montana State University should continue their master's programs, the latter with a restricted focus on Montana and regional history. The Ph.D. program at the University of Montana is currently in moratorium.

Fine Arts

The fine arts are essential to every institution of higher education, and the college or university campus also tends to be a cultural center for the surrounding area. At a minimum students should have the opportunity to observe and participate in at least some of the fine arts.

However, in the situation where no formal academic program is offered, it is often difficult to provide qualified staff for the fine arts as an extracurricular activity. This tends to lead to some formal course offerings, which many students take as a form of self expression. Even where degree programs are available, many students major in the arts for their own satisfaction rather than with the idea of trying to make a career in the field. In some areas of the arts employment is extremely difficult to find. The humanities share many of these characteristics but the arts have the additional complication that they require specialized facilities and equipment, and this makes the proliferation of programs expensive. With relatively few formal programs, Montana Tech, Northern and Western need to investigate cooperative mechanisms for making the arts more available to their students.

Art

The University of Montana will be the primary institution in art and will continue to offer the BA, MA, BFA and MFA. Montana State University offers the BA, MA in Art and MFA. Eastern Montana College offers the bachelor's degree.

Music

The University of Montana will offer the only programs designed to prepare for professional performance and will continue to offer the BA, MA, BM, MM and bachelor's and master's in music education. Montana State University offers the bachelor's in music education and will continue to offer the master of education degree with a major in music education. Eastern Montana College offers the bachelor's degree.

Drama and Theatre Arts

The University of Montana will offer the only programs designed to prepare for professional performance, and will continue to offer the BA, MA, BFA and MFA. Montana State University will be confined to the BA degree. Eastern Montana College now offers a theatre arts option in the communication arts degree. Northern's recently approved minor in theatre arts, worked out in cooperation with the universities, is indicative of how inter-institutional assistance can enhance the performing and creative arts in the smaller units. Students and faculty at each campus should have access to theatrical productions.

Dance

The University of Montana will continue to offer the only bachelor's program. No graduate programs will be contemplated until the facilities problem has been solved.

Film and Television Production

Montana State University offers three options in this program: motion pictures, television, and still photography. From an examination of both faculty and student interests it is clear that the motion pictures and still photography options are viewed as art forms and are appropriately included in a discussion of the arts. Degrees in these programs will continue to be offered exclusively by Montana State University. The television option is oriented more toward production and includes some work which is applicable to radio. This program and the radio-television program at the University of Montana appear to complement rather than duplicate each other. The fact that one program is set in the context

of the arts and the other in journalism will inevitably give them a character and emphasis which is considerably different, and both serve useful purposes for the student.

Social Sciences

Political Science

All college students should develop at least a rudimentary understanding of political systems and ideologies, and a working knowledge of American political and legal processes and policy formation. We would not expect the smaller units, however, to be able to sustain baccalaureate degree programs. The University of Montana will continue offering the bachelor's and master's and will participate in the inter-university MPA program. Montana State University will continue to offer the bachelor's and will also participate in the inter-university MPA program. No doctorate should be offered in political science.

Sociology

The master's and bachelor's programs at the University of Montana will be continued. The bachelor's program at Montana State University has options which provide for a liberal arts program, a pre-graduate school program, and a rural sociology program, all of which are reasonable variations on the main theme. In addition, Montana State University has traditionally offered options in anthropology, social work and social justice, which are in fact separate programs, and should not be construed as options in sociology. Montana State University may develop a master's program restricted to Rural Sociology, tying closely into the research and community development work of the Agricultural Experiment Station and Cooperative Extension Service. Eastern Montana College will continue to offer the bachelor's degree. At present the University of Montana confers the Ph.D. in Sociology, and should continue to do so as long as need and quality are sustained.

Anthropology

This subject attracts considerable student interest. Archaeology offers good opportunities for faculty research in the state. The University of Montana will continue to offer the bachelor's and master's. Montana State University now offers an anthropology option, inappropriately under the sociology degree. No doctorate should be offered in anthropology.

Psychology

The University of Montana will continue to offer the doctorate in both clinical and experimental psychology, a master's in school psychology, and bachelor's and master's in psychology. Montana State University will continue to offer the bachelor's and master's, but the master's program shall be concentrated on fields such as human factors and biofeedback which build on and interact with the biological, medical and engineering strengths at the University. Montana State University will not otherwise offer graduate work in psychology. Eastern Montana College will continue to offer the bachelor's degree. Northern, Western and Montana Tech will not develop degree programs in psychology.

Speech Communication

At the moment this discipline goes under the name of interpersonal communication at the University of Montana, speech communication at Montana State University, and communication arts at Eastern Montana College. The University of Montana will continue to offer the bachelor's and master's degrees. Montana State University offers the bachelor's

degree and has arranged a cooperative master's program with the University of Montana which appears to be working satisfactorily. Eastern Montana College offers the bachelor's degree.

Economics

Montana State University offers a master's and doctorate in applied economics (formerly agricultural economics) and a bachelor's in economics. The University of Montana will continue to offer the bachelor's and master's. Eastern Montana College may develop a bachelor's, which should be closely related to the business program at the college and the postsecondary educational needs of metropolitan Billings.

Geography

The University of Montana will continue to offer the bachelor's and master's, and also a master's in rural, town and regional planning. Montana State University will continue to offer a geography option in the master's and bachelor's degrees in earth sciences but it shall be in the context of an interdisciplinary department which also offers work in geology and meteorology. No doctorate will be offered in this field.

Biological Science

The University of Montana and Montana State University both offer comprehensive programs in the biological sciences, and should continue to do so. The basic programs are the degrees in botany, microbiology, and zoology which are offered by both universities at the bachelor's, master's and doctorate level. The University of Montana also offers a BA in biology, a liberal arts degree, and Eastern Montana College offers a bachelor's degree in biology. Beyond these basic degrees we find a large number of degrees which represent either specialties in the basic sciences or applications of the biological sciences.

These degrees include the following:

Entomology: MSU - MS, PhD

Fish and Wildlife Management: MSU - BS, MS, PhD

^{1*}Environmental Studies: UM - MS

Forestry: UM - BS, MS, MF, PhD

Genetics: MSU - PhD

Plant Pathology: MSU - MS, PhD

^{1*}Resource Administration: UM - M. Res. Admin.

^{1*}Resource Conservation: UM - BS, MS

Veterinary Science: MSU - MS, PhD

Wildlife Biology: UM - BS, MS

Environmental Health: Water and waste Water

Treatment: NMC - AS

^{1*}These are interdisciplinary programs with strong social science components also.

The above list omits degrees offered by the Department of Plant and Soil Science and Animal and Range Science in the College of Agriculture at Montana State University.

Current programs in the biological sciences are not unnecessarily duplicative, and are meeting some very important needs of the state. At this time, the four colleges should be restricted from developing additional degree programs in the biological sciences which would duplicate those at either of the two universities.

Physical Sciences

Computer Science

This is probably the most underdeveloped field in the University System. In the past, inadequate facilities and a shortage of qualified faculty members have inhibited the growth of programs in computer science. Graduates in many fields are now expected to be familiar with computer applications, and employment opportunities are good for persons trained in computer science. Computing facilities have been, or are in the process of being, improved on all campuses. All units should offer introductory service courses in computer programming and an effort should be made to see that appropriate computer applications are worked into all instructional programs. In addition, all undergraduate curricula in computer science should ensure that bachelor's graduates have the necessary background to pursue an advanced degree or to qualify for employment in a related field. Montana State University and the University of Montana currently offer a bachelor of science degree in computer science. Montana Tech should develop a bachelor's degree program with emphasis on engineering and scientific applications. Northern Montana College should develop an associate degree program in computer technology. Montana State University and the University of Montana will be allowed to consider non-overlapping master's programs with each program suited to the particular strengths of the institution. In addition to specific computer science programs delineated above, each unit of the system should serve as an educational center for computer education and should offer sufficient support courses in computer science for its students to help elevate the computer literacy of the state.

Mathematics

Both the University of Montana and Montana State University offer the bachelor's, master's and Ph.D. degrees. More attention should be given to differentiating the two doctoral programs and each program should strive for excellence in a well-defined area rather than attempt any sort of comprehensive coverage of the entire field. The University of Montana program should continue the college teaching emphasis. The Montana State University program should emphasize applied mathematics and statistics, as contrasted to pure mathematics. Eastern Montana College and Montana Tech will continue to offer the bachelor's degree, while Western will be confined to a teacher preparation program. Northern will maintain its present teacher education major as well as enhance its applied mathematics support for its technical programs. Eastern should continue its liberal arts mathematics program, and develop courses in statistics as support for business and other programs. Montana Tech should emphasize applied mathematics and statistics.

Physics

Bachelor's degree programs should be confined to Montana State University and the University of Montana.² The University of Montana offers a master's degree program. Montana State University will continue to offer a master's and the only Ph.D. program. Physics teaching majors

²Physics and mathematics courses form the foundation for all physical science and engineering programs. Montana Tech, therefore, offers extensive instruction in physics, and should not be arbitrarily prevented from proposing a B.S. in physics when it can be demonstrated that they can attract enough majors to sustain enrollments in the upper division physics courses that would not ordinarily be taken by majors in other fields, even engineering.

should be offered only at the University of Montana and Montana State University as a byproduct of the bachelor's degree programs. Student demand for these programs is very low, and they are probably inappropriate for all but a few secondary schools.

Chemistry

Chemistry is an important science in its own right and is also central to work in the biological sciences, health sciences, environmental studies, and technical fields. Consequently we can expect to see large programs in this field and substantial duplication among the units of the University System. The University of Montana and Montana State University will continue to offer work through the doctorate. Eastern Montana College and Montana Tech will offer bachelor's degrees, and Montana Tech offers a master's in geochemistry in collaboration with the two universities.³

Astronomy

Both the University of Montana and Montana State University will continue to offer some astronomy courses in connection with their physics programs, but no separate degree program should be anticipated.

Geology and Earth Sciences

The University of Montana, Montana State University and Montana Tech all have substantial, but highly differentiated, programs in geology. The University of Montana program is the only one in comprehensive geology and the only one which goes through the doctorate.

³While a degree in geochemistry is conferred by Montana Tech, it should be noted that extensive instruction in geochemistry is offered at the University of Montana, but would be comprehended in a degree program in geology.

Geology at Montana State University is embedded in the earth sciences department and should continue to emphasize the connections with geography and meteorology. This program should not develop beyond the present master's level. Montana Tech offers a master's degree in geology plus bachelor's and master's degrees in geological engineering, and offers a master's in geochemistry in collaboration with the two universities. There should be no further development of degree programs in geology and the earth sciences.

Teacher Education

Five units of the Montana University System offer programs in teacher education, and for three of these units teacher training was at one time their only mission. In recent years an apparent decrease in demand for teachers has raised questions about the necessity for maintaining all of these programs. It is important that accurate information on employment opportunities continue to be made available to students in all fields. Many students, however, major in education with no intention of seeking immediate employment in the field. Some want a teaching credential with the idea that they may want to begin teaching several years into the future.

Teacher training is one area where the Regents do not have full discretion in establishing the curriculum as others who have jurisdiction over elementary and secondary education set teacher certification standards. To a large extent teacher education curricula are in response to certification requirements.

The Board of Public Education has recently adopted a rule which sets standards for teacher certification in each area for which an endorsement is offered. Previously, the initiative for proposing fields for teacher certification rested with the teacher training institutions. The fields offered tended to correspond to traditional academic majors and to represent the interests of the college and university faculty members. A new field for a teaching major was reviewed by staff in the Office of Public Instruction and then approved by the Board of Public Education. The actual requirements for the teaching major were then set by the teacher training institution.

Under the new rule each teacher education program will have to meet specified standards in order to be approved. The process leading to approval will be carried out by visiting teams appointed by the Office of Public Instruction. These teams will be broadly representative of the educational community. Each teacher education program will be visited for approval every five years or more often if deemed necessary.

A study is now underway to determine which endorsement areas should be offered as minors, majors and broadfields. After this study is completed, recommendations will be presented to the Regents for the assignment of specific minors, majors and broadfields to the five teacher training institutions.

Fifth-year and master's programs in elementary and secondary education are offered by the University of Montana, Montana State University and Western Montana College. Eastern and Northern offer fifth-year and master's programs in elementary education, Northern offers a fifth-year in secondary education, and Eastern may add a master's program in secondary education. Master's degrees in administration are restricted to the University of Montana and Montana State University, but Northern Montana College may develop the specific area of vocational administration on the master's level. Master's degrees in counseling are restricted to the University of Montana, Montana State University and Eastern Montana College, with programs in rehabilitation counseling at Eastern Montana College and career guidance at Northern Montana College. Unique master's degrees are the ones in special education at Eastern Montana College and vocational-technical education at Northern. Other master's degrees will be dealt with in the corresponding subject matter section of this report.

Sixth-year and doctoral programs are restricted to the University of Montana and Montana State University. The fields for doctoral programs are restricted as follows:

- UM: Administration and Supervision
- Curriculum and Instruction
- Guidance and Counseling
- MSU: General School Administration
- Curriculum and Instruction
- Adult and Higher Education

The University of Montana and Eastern Montana College are encouraged to develop a joint doctoral program in special education.

Business and Management

Student interest and employment opportunities in this field have been increasing rapidly and it is obvious that the demand cannot be met by a single institution. In addition the demand for in-service education at both the undergraduate and graduate levels is growing and the University System must establish a coordinated program for meeting the needs of the major population centers of the state.

At the undergraduate level the University of Montana and Montana State University will continue to offer full programs with a range of options, and the general business program at Eastern Montana College will be expanded. Montana State University will also continue to offer a bachelor's program in agricultural business. Western Montana College will be restricted to teacher preparation but may develop a two-year program in resort management which is closely tied to the natural heritage program and articulated with the business program at the University of Montana. Montana Tech will continue to offer only lower division transfer courses plus business courses which may be required in Tech's engineering curricula.

The professional MBA degree will be offered only by the University of Montana, which will continue also to operate the MBA program in Great Falls at Malmstrom Air Force Base. The University of Montana should move to develop an MBA or combined MBA/MPA program in Billings, coordinating with and using resources from Eastern Montana College and Montana State University as appropriate. The degree would be conferred only by the University of Montana. The master's programs at Montana State

University should be directly tied to its unique mission; that is, the existing master's in industrial and management engineering and in business education and, as the need arises, a new degree in either agribusiness, farm and ranch management or other appropriate areas. No doctorate in business will be offered.

Montana State University and the University of Montana will continue the MPA programs on their campuses and will jointly operate the MPA program in Helena. An MBA program will not be offered in Helena, although the offering of courses which could be applied either toward the MPA or toward the MBA at the University of Montana is encouraged. Off-campus MPA and MBA programs of the University system should not compete against one another in the same location, but there should be a good number of common courses to apply toward either degree.

The University of Montana will continue as the major center of business and business-related instruction and research in Montana, and other institutions should coordinate their business curricula with the University.

Engineering

Professional engineering programs are confined to Montana State University and Montana Tech. This situation should continue. The technology programs at Northern Montana College are clearly differentiated from professional engineering. They should retain their unique purpose and identity and not develop into engineering programs.

The following table shows the professional engineering programs which are authorized at present.

	<u>MSU</u>	<u>Tech</u>
Agricultural	BS, MS	
Chemical	BS, MS, PhD	
Civil	BS, MS, PhD	
Electrical	BS, MS, PhD	
Engineering Science	BS	BS, MS
Environmental		BS
Geological		BS, MS
Geophysical		BS, MS
Industrial and Management	BS, MS	
Mechanical	BS, MS, PhD	
Metallurgical		BS, MS
Mineral Processing		BS, MS
Mining		BS, MS
Petroleum		BS, MS

As can be seen from the above list, the engineering programs at Montana State University and Montana Tech are well differentiated. Those at Montana State University represent the conventional fields of engineering, plus agricultural, which comes out of Montana State University's historic mission. The programs at Montana Tech have grown out of the historic mission of the School of Mines. There are two areas of actual or potential overlap, environmental engineering and engineering materials.

In both cases the activities are appreciably different because of the different institutional settings. As a result there should be relatively little duplication. While environmental engineering is nationally recognized as a branch of civil engineering, Montana Tech nevertheless is authorized to maintain a BS program concentrating on mine pollution problems and associated industrial pollution control. Tech should be careful not to expand its program into traditional civil engineering fields which are the province of Montana State University, where environmental engineering training takes place at present under the civil engineering department, at the baccalaureate, master's and Ph.D. levels. Any expansion to the graduate level at Montana Tech should be clearly restricted to mine-related problems not addressed in the Montana State University curriculum. Montana State University could add bachelor's and master's programs in environmental engineering to give some identity to activities which are already taking place.

Montana Tech offers master's degrees in metallurgy and mineral processing, but the corresponding bachelor's degrees are not offered.

Technology

Northern Montana College will continue to have exclusive responsibility for vocational-technical education and primary responsibility for vocational teacher training.⁴ Northern Montana College will also have exclusive responsibility for all technology/technician training programs

⁴Montana State University shares this responsibility in vocational agriculture, home economics, industrial arts and business education. Western prepares industrial arts teachers, the University of Montana prepares teachers in home economics and business, and Eastern prepares business teachers.

at less than the bachelor's level except in new program areas where existing facilities make another location clearly more appropriate. The blanket authorization from the Board of Regents for Associate of Arts/Sciences degrees shall not be used by the other units to subvert this delegation.

The following chart shows the majors available at Northern Montana College in the various programs in this area:

	B.S. in Vocational- Technical Education	Bachelor of Technology	Associate in Engineering Technology	Associate of Sciences
Agriculture Tech				x
Automotive	x	x		Service, Body
Construction		x	x	x
Diesel	x	x		x
Drafting	x	x		x
Electrical				x
Electronics	x	x	x	x
Mechanical		x	x	x
Metals Technology				x
Trade and Technical	x	x		

The agriculture program should not be expanded beyond the associate level.

The above programs are differentiated from, and are not designed to compete with, the following bachelor's degree programs at Montana State University:

- Construction engineering technology
- Electrical and electronics engineering technology
- Mechanical engineering technology

Montana Tech should study whether there is a need for engineering technology degrees in any of the fields where it offers engineering degrees. The engineering technology programs at Montana State University and Montana Tech are clearly differentiated from technology programs offered at Northern Montana College and should retain their unique purpose and identity.

Industrial Arts

Montana State University offers a bachelor's degree and Northern and Western both offer teaching majors. Montana State University and Northern were both recently authorized to offer the master's degree.

Home Economics

Montana State University offers the bachelor's and master's degrees and the University of Montana offers the bachelor's degree; Montana State University enrolls over 300 students and the University of Montana enrolls over 200. Home economics is not a single program, but is actually several distinct programs at each institution:

- MSU: Business Option
- Child Development/Family Life Option
- Education and Extension Option
- Institutional Food Management Option
- (includes Dietetics program emphasis)
- UM: Home Economics Education
- Food and Nutrition
- Clothing and Textile Business
- Child Development/Pre-School Teaching
- Family Economics and Management

The total range of subjects covered is comparable but the programs are packaged in different ways. A strength at Montana State University

is that the home economics faculty members are specialized and usually teach in only one subject area.

Montana State University, as the state's land-grant institution, has the mandated responsibility to provide instruction, research and extension programs in Home Economics, but there is no mandate respecting organizational arrangements. The extension component, administered through the Extension Service, fulfills the function of disseminating home economics knowledge to Montanans through its outreach programs.

Allied Health

The constellation of allied health programs in the University System evolved over the years into a pattern that seems to work, even though it represents an irrational allocation of programs. This more-or-less chaotic situation came about because of a number of factors: assignment of particular programs to campuses in the early days of the system, development of strong programs in the biological sciences at both universities with particular strength in the behavioral sciences and medical biochemistry at the University of Montana and in biochemistry at Montana State University, and initiative by individual faculty members and administrators without any system-wide planning. In fact, it is only in the last few years that allied health has been viewed as a field, so the earlier lack of a coherent plan is not surprising. The assignment of allied health programs has been examined from several points of view: primary vs. secondary care specialties, patient contact vs. support services, and medical science based vs. behavioral science based. None of these models offers any useful guidance in describing

the division of responsibility between the University of Montana and Montana State University. Moreover, it is clear that the existing programs are well-established with dedicated groups of faculty and specialized facilities. The harm produced in moving any of them would outweigh any possible benefits that might result.

The following allied health programs are in operation at present in the University System:

UM: Pharmacy - BS, MS

Clinical psychology - PhD

Medical technology (Department of Microbiology) - BS

Physical therapy (School of Pharmacy and Allied Health) - BS

Communication sciences and disorders - BA, MA, MCSD

Dietetics (Department of Home Economics) - BS

MSU: Medicine (WAMI Program, 1st year only)

Nursing - BSN, MN

Medical technology (Department of Microbiology) - BS

Sanitarians (Environmental health option,

Department of Microbiology) - BS

Dietetics and nutrition (School of Home Economics - BS

(Also the WAMI Program and Animal Science Department)

Veterinary Science - MS, PhD

Gerontology - lead institution, to work in cooperation

with UM and EMC and other postsecondary institutions.

Tech: Occupational safety and health - BS

NMC: Nursing - AD

Recommendations:

1) Campuses should investigate whether the programs in medical technology can be structured so that the student completes the bachelor's degree before starting the clinical portion of the program.

2) The bachelor's degrees in pre-medicine at Montana State University and pre-medical sciences at the University of Montana should be discontinued. These degrees have been used primarily for student recruiting and if a student has this degree and does not get into medical or dental school he has a poor base for seeking either employment or admission to graduate school. Moreover, there is little evidence that a degree called "pre-med" is of any particular benefit in gaining admission to medical school. Strong, well coordinated pre-medical advising programs should be continued.

3) Montana State University and Northern Montana College should coordinate their programs in nursing wherever possible, and attempt to establish a transfer track from Northern Montana College to Montana State University.

Human Services

Many graduates of the Montana University System work in the human services field, but relatively few studied in a curriculum specifically designed to prepare them for this work. A need will continue for pre-service education in the University System, but an even greater need is for in-service education for those already employed and working in the field. In-service education needs cover the span from freshman to graduate level and include everything from one-day workshops to full

degree programs. Human service workers are dispersed geographically, being stationed in every county seat and many small towns in between. The delivery of a planned, coherent program of in-service education to this group is a major challenge and opportunity for the University System.

At present relatively few degree programs are authorized and in operation. The University of Montana offers the BA in social work, and Montana State University offers social work inappropriately under the sociology degree. Both social work programs are accredited. Both Montana State University and the University of Montana have social work faculty members stationed at Eastern Montana College, and Eastern should look toward expanding its role in the human services and bringing them together in a coordinated administrative entity, thus becoming a base for in-service education in the eastern part of the state.

There may be a need for a professional master's program in social work. If a clear need can be established, such a program should be administered by the University of Montana and the degree should be conferred by that institution. Montana State University and Eastern Montana College should participate in the program.

A major need is for in-service education for persons whose formal education ended with high school. The University of Montana is now offering an associate degree for inmates and staff at the prison in Deer Lodge. Western Montana College should develop an associate degree program to be available on campus and also at Boulder, Warm Springs and Galen. A program aimed at alcoholism counselors has also been requested, and should be considered seriously.

The Montana University Affiliated Program for Developmental Disabilities has been assigned to the University of Montana and has been assigned to the University of Montana and has the provision of in-service education to providers as one of its major thrusts. The UAP offers the model of a lead institution making use of expertise available throughout higher education in the state. As experience is gained with the operation of the UAP, the possibility of extending this model to other areas of human services should be investigated.

Unique Professional Programs

The preceding analysis has concentrated on programs which are in operation at more than one unit of the Montana University System. In addition there are professional degree programs which are unique to a single unit, listed below:

UM:	Law
	Pharmacy
	Journalism
	Physical Therapy
	Communication Sciences and Disorders
	Forestry
MSU:	Agriculture
	Nursing Architecture
	Medicine (WAMI Program)
EMC:	Special Education
	Rehabilitation
NMC:	Vocational-Technical Education

These program monopolies should continue. If one wanted to start again from scratch, or include the option of closing one or more units of the University System, then perhaps a more rational assignment of programs might be worked out. For almost any program one cares to pick, good arguments can be found for showing that the present location is the best, and also persuasive reasons can be given for removing it to another campus. Almost every program has some unique facilities which could not be moved, and most benefit from interactions with faculty members in other departments on the present campus. No program has been identified where the advantages of moving it clearly outweigh the advantages of leaving it in place. If a program were moved, it is doubtful it would arrive on the second campus as the same program it was when it left the first. There would be changes in institutional setting, facilities, students, administration and probably some faculty which would produce inevitable changes, some of them gains, and some of them losses.

While the assignment of unique programs results in an unambiguous list, the real problem is the interface between programs. Meetings between disciplines or professional groups represented on more than one campus should be encouraged in order to work out complementarity and non-duplication. When understandings or agreements are worked out and approved by the Commissioner they should be filed in the Commissioner's Office so they become a matter of record.

It is impossible to examine and map out all possible interfaces in

advance, because sometimes they become obvious or important only as the result of new developments. A good example is land resources. The following chart depicts how programs on three campuses have developed in this area.

	<u>Program Areas Unique to One Institution</u>	<u>Program Areas Conducted by More Than One Institution</u>
MSU:	Agricultural Land Management	Range, Fish and Wildlife Mgmt.
	Farm and Ranch Management	Mine Spoil Reclamation
	Soil Inventory and Analysis	Land Management
	Agricultural Economics	Land Inventory and Analysis
	Landscape Horticulture	Recreation Area Resource Mgmt.
UM:	Forest Land Management	Range and Wildlife
	Wilderness Management	Mine Spoil Reclamation
	Multiple Use Land Mgmt.	Land Management
	Forest Economics	Land Inventory and Analysis
	Recreation	Recreation Area Resource Mgmt.
	Rural, Town & Regional Planning	Mineral Economics
Tech:	Mine Management	Mine Spoil Reclamation
		Mineral Economics (Bureau)

It is clear that additional work needs to be done to define the role of the three institutions in strip mine land reclamation, a subject which had received virtually no attention until a few years ago. This also illustrates that while the major outlines of the Role and Scope of the Montana University System can be set with some assurance, the details and the interfaces must be constantly examined to take account of changing conditions on and off the campuses.

This statement on role and scope should be viewed much as we look at a constitution. It allocates and limits authority in program areas, and is a general guide to the future for the six campuses of the Montana University System. But it must be subject to amendment under extraordinary circumstances and in response to changes in the social, political and economic environment in which the University System operates. It must allow additionally for innovation in higher education, encouraging experimentation with format and substance of academic programs.

Supplement

Academic Program Review

The Board of Regents policy on academic program review states that:

- "1. Existing programs shall be reviewed on a regular basis by each unit. The Commissioner of Higher Education shall initiate and coordinate such reviews of existing programs as he deems appropriate and necessary. The Commissioner shall report his findings to the Board.
2. An initial lateral review of all programs will be conducted."

With reference to the lateral reviews the procedures indicate:

- "3. Selected lateral (interinstitutional) reviews will be carried out. Requests for programs to be reviewed will be submitted to the chief academic officers for selection, prioritization, and scheduling. The specific issues to be addressed in each lateral review should be identified prior to the start of the review. This type of review will not be started until institutional role and scope statements are approved by the Regents. The review of proposals for new programs will also frequently result in the review of similar programs in other units."

In preparing the Role and Scope document we were able to identify some programs that should be reviewed for one purpose or another. The following should be reviewed:

1. Inappropriate Options

An option in a given major should correspond to a legitimate sub-field of the major field. At present there are several such options which are inappropriately placed. Each of them should be brought to the Regents for approval as separate degree programs. Failing such approval, they should be dropped from the catalog. They are:

Eastern Montana College

Theatre Arts. (option under Communication-Arts)

Montana State University

Anthropology

Social Justice

Social Work (options under Sociology)

2. Interdisciplinary Programs

During the last decade there was a national trend (largely in response to student activists and their demands for an ill-defined "relevance") to abandon structure and group requirements in the curriculum, allowing the student to "do his own thing." Montana did not follow the trend to the same extent as many other states, yet it is appropriate now to examine the various interdisciplinary degree programs which we do have in order to determine whether they maintain enough structure and focus to sustain academic integrity. If they do not, they should be reconstituted or dropped from the catalogs.

3. Graduate Programs in Disciplinary Subfields

This may not be a problem at present, but it could easily become

one as small departments seek authorization to offer graduate programs. As an example, geochemistry is a subfield of geology. A graduate program in "geochemistry" at Montana Tech may possibly 1) be too narrow a curriculum for a degree, and/or 2) mistakenly convey the impression that within our System Tech is the only unit offering geochemistry when, in fact, a student earning a degree in "geology" at the University of Montana may actually be exposed to extensive instruction in geochemistry. As a general principle, graduate degrees, like undergraduate degrees, should be in the parent field with one or more emphases in subfields. As another example, a student emphasizing "biochemistry" at the Ph.D. level at either Montana State University or the University of Montana should receive his degree in the parent field of chemistry.

4. Montana State University Degree Structure in Biology

The referees who reviewed the duplicate Ph.D. programs in the biological sciences urged that Montana State University re-examine the structure of its degrees. In particular, the necessity for separate degrees in entomology, plant pathology, and genetics should be reviewed, given the existence of degrees in botany or zoology. Are the programs involved substantial enough to warrant a separate degree? The continuation of the Ph.D. in fish and wildlife management at Montana State University should be examined in light of student interest and employment opportunities. The occasional student might be appropriately carried under the Ph.D. in zoology.

5. Specific Reviews

The Regents will establish a schedule of individual program reviews and lateral reviews. In each case, the particular issue or concern will be identified.